INL Deputy Director for Science & Technology David Hill, left, leads visiting dignitaries in the ritual of turning over shovels of soil, marking the start of construction on the 10-acre property.

New INL Energy Systems Laboratory enters construction phase

by Reuel Smith, *INL Energy & Environment Communications*

Outside temperatures in February can be hard to forecast, and especially difficult to live with when scheduling a mid-winter groundbreaking ceremony. Such was the case during a February groundbreaking for Idaho National Laboratory's new Energy Systems Laboratory. On that clear, sunny day, a temperature of 8 degrees Fahrenheit and a wind chill of -10 were recorded. You could say the cold literally froze this important moment in time and in memory.

The ESL will include state-of-the-art high-bay lab space where bioenergy feedstock processing, advanced battery testing and hybrid energy systems integration research will take place.

The stage for this celebration was set years earlier when the lab's Procurement Office began negotiations for a testing and demonstration facility. The office had to arrange funding mechanisms and make sure the new facility would be designed for state-of-the-art high-bay lab space where leading bioenergy feedstock processing, advanced battery testing and hybrid energy systems integration research could be conducted. Now that these requirements have been achieved, construction can begin. Occupancy of the facility is expected in August 2012.

Dignitaries, guests and employees attending the event were greeted by INL Deputy Laboratory Director David Hill and Associate Laboratory Director J.W. "Bill" Rogers Jr. at the Center for Advanced Energy Studies (CAES) prior to traveling to the construction site for an outdoor ceremonial groundbreaking.

Other speakers included Idaho Gov. C.L. "Butch" Otter, U.S. Rep. Mike Simpson of Idaho and John Ferrell from the U.S. Department of Energy's Office of Biomass Program. Local and state officials were invited to mark the construction of the 91,000-square-foot research facility on a 10-acre site east of CAES.

During the program, Hill spoke to the 130 attendees about the historic nature of the event and the impact on INL researchers.

"Our labs are defined by their distinctive facilities and capabilities, but what makes the difference is the people," said Hill. "Putting these capabilities together has allowed us to bring together a top-quality work force — adding over 700 high-quality jobs in the last five years."

"This building is just one more step in the reinvigoration and establishment of an asset that we believe is an asset for the state, the region and the country," said Hill.

Otter said the Center for Advanced Energy Studies and its offshoots were as good an investment as he'd made throughout his decades-long career as a U.S. congressman and Idaho's governor. In particular, he called out INL's role in energy security research.

"Where are people of the world going to come looking for somebody to solve their energy problems?" Otter said. "And, how do you put biomass, solar, geothermal, wind, nuclear and hydro all on the same grid?"

Rep. Mike Simpson congratulated all whose labors made the groundbreaking possible. "It is certainly nice to see buildings going up at INL, rather than being boarded up," the congressman said.

"Because of the work that the employees do here, you make my job easier in Washington, D.C.," said Simpson. "It used to be that we'd go to the Energy & Water Appropriations Committeeand try to sell the Idaho lab. Now the committee understands the importance it plays — not just to southeast Idaho, and not just to Idaho, but to our nation — and to our efforts to become less dependent on foreign energy and the importance of making ourselves much more energy independent."

John Ferrell, Feedstock/Sustainability Team Leader from the Office of Biomass Program at DOE's Office of Energy Efficiency & Renewable Energy noted his support for the two key EE&RE programs in the building — Vehicle Technology's Advanced Batteries Program, and Biomass Program Feedstocks/Logistics research.

"The mobile Process Demonstration Unit to be housed here will have unique capabilities; not only in the nation but, we think, in the world," said Ferrell. "This is really the only one — first and foremost in terms of feedstock logistics — and we're extremely proud that it's here in Idaho because this group has worked very hard and is most deserving."

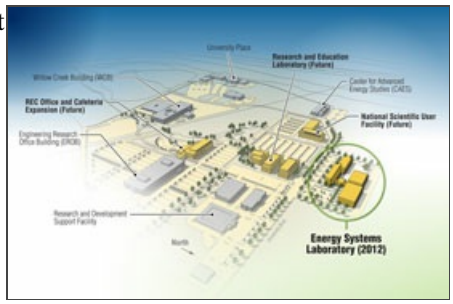
INL associate lab director Rogers called the groundbreaking a reminder that the programs and capabilities INL has been growing for six years are becoming increasingly viable and visible.

"Individually, our bioenergy, advanced battery testing and hybrid energy systems programs were not large enough to justify a new research facility," Rogers said. "But their combined synergy and need for administrative office space, high-bay open floor space, common utilities and services made it possible to get greater value through a shared footprint."

"We are now poised to make major strides in overcoming key technical barriers facing the U.S. bioenergy industry, significantly expanding DOE's ability to evaluate new battery technologies, and demonstrating that renewable, fossil and nuclear energy systems can be successfully and efficiently integrated."

Rogers closed the program by noting that this is the largest INL research laboratory construction project in Idaho Falls since the INL Research Center labs were constructed in the early 1980s.

"This testing and demonstration facility represents a new and unique asset for INL and will afford wonderful new research opportunities," Rogers said. "We are indebted to all who helped make this dream come true."



The Energy Systems Laboratory will be an exciting addition to the INL's Research and Education Campus in Idaho Falls.

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